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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

June 24, 1999

Magalie Roman Salas, Secretary
Federal Communications Commission
The Portals
445 12th Street, S.W., Room A325
Washington, D.C. 20554

Re: IB Docket No. 99-81
RM-9328

Dear Ms. Salas:

Herewith transmitted, on behalf of TMI Communications and Company, Limited Partnership, are an original and six copies of its "Comments" in the above-referenced proceeding.

In the event there are any questions concerning this matter, please communicate with this office.

Very truly yours,


Peter M. Connolly

Enclosures

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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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In the Matter of)
)
The Establishment of Policies)
and Service Rules for the Mobile)
Satellite Service in the 2 GHz Band)
_____)

IB Docket No. 99-81
RM-9328

COMMENTS OF
TMI COMMUNICATIONS AND COMPANY, LIMITED PARTNERSHIP

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June 24, 1999

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Summary

TMI Communications and Company, Limited Partnership (“TMI”) supports the flexible approach which the FCC has taken to the problem of 2 Ghz MSS licensing in this proceeding, but notes concerns that adequate spectrum must be held in reserve to permit system expansion and that the FCC has not yet made clear how the FCC’s spectrum allotments in this processing round will be coordinated with those of neighboring administrations.

TMI generally supports the FCC’s proposals with respect to MSS technical operations and licensing GSO and NGSO systems in the same frequency bands. TMI considers the FCC’s proposal to assign spectrum in 1.25 MHZ “multiples” to be reasonable, provided there is flexibility to modify that plan as market conditions warrant.

TMI supports the FCC’s Flexible Band Arrangement as being the most equitable and flexible proposal among these offered for comment and continues to oppose the imposition of microwave relocation costs on MSS licensees. If such costs are imposed, however, the costs should be borne equitably by all licensees.

TMI recommends that the FCC not adopt the “negotiated entry” or “traditional band” proposals as the first would result in undue delay and the second would not permit necessary allocation flexibility. TMI also opposes a competitive bidding process for license allocation, in part because of the unfortunate international precedent such a process would set.

TMI supports the FCC’s proposals with respect to feeder links and asks that its own feeder link proposal be found to be consistent with the FCC’s objectives. TMI also requests that the FCC find its proposal to use Ku-band frequencies for its feeder links to be consistent with the public interest.

TMI agrees that there should be construction milestones and suggests that they should be two years to begin and five years to complete construction of GSO satellites. TMI also believes that construction milestones should not depend on access to feeder link assignments.

TMI also believes the earth station component of the 2 Ghz network operating in the U.S. territories should be licensed by a blanket license issued by the FCC.

Finally, it is vital that the FCC coordinate with other countries in Region 2 to ensure that their proposed spectrum allocation are not inconsistent with U.S. plans, in order that operators are not faced with future delays in establishing service.

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

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IB Docket No. 99-81
RM-9328

**COMMENTS OF
TMI COMMUNICATIONS AND COMPANY, LIMITED PARTNERSHIP**

Introduction

1. TMI Communications and Company, Limited Partnership ("TMI" or "the Company") hereby files its comments on the Notice of Proposed Rulemaking in the above-captioned proceeding.¹
2. TMI is a Canadian-licensed mobile-satellite service ("MSS") operator currently providing service in the L-Band (1.5/1.6 Ghz) via a geostationary satellite (MSAT-1) located at 106.5° west longitude.
3. TMI is one of the nine applicants seeking spectrum in this processing round for the 2 GHz MSS frequency band. The Commission's request for comments is thus of vital importance to TMI, and we are pleased to make this submission regarding these critical

¹ In the Matter of The Establishment of Policies and Service Rules for the Mobile Satellite Service in the 2 Ghz Band, IB Docket 99-81, RM-9328, Notice of Proposed Rulemaking, FCC 99-50, released March 25, 1999 ("NPRM").

issues. TMI is encouraged by the breadth of proposed options which the Commission is considering, and trusts that the Company's comments and those of other participants will convince the Commission to adopt policies which will promote innovative spectrum solutions in this band.

4. At the outset, TMI is concerned that, with an average of 3.75 MHz allotted to the nine applicants in this processing round, many operators will find themselves limited in their ability to sustain long-term growth, particularly if the applications they develop are determined by the market to be innovative and provide benefits which gain widespread acceptance. As will be discussed below, TMI concurs with the Commission's preliminary view that expansion bands of spectrum should be kept in reserve for the current applicants to have an opportunity to expand their initial allotments of spectrum.
- 5 TMI would also note a general concern that it is yet unclear how the Commission's spectrum allotment in this processing round will be coordinated with those of neighboring administrations which will be assigning spectrum to some of the same applicants which are participating in this proceeding as well as to new parties. In particular, TMI's 2 GHz application to the Canadian Government predates its application to the FCC in this proceeding, and Industry Canada filed with the ITU a description of the characteristics of TMI's planned satellite network, CANSAT-M3. Some of the FCC's determinations in this proceeding may need to be refined to reflect the outcome of similar spectrum assignments in neighboring countries. Presumably, many if not all applicants in the current round will want to provide service throughout the hemisphere, and indeed their business plans may depend on their ability to secure spectrum in several countries. Implementation, for example, of spot beams which can accommodate different frequency ranges in different countries may not be technically or economically feasible. It is also not desirable to impose further restrictions on coverage of areas close to borders of other countries. TMI requests that the Commission clarify what procedures

it proposes to adopt to optimize the coordination of frequencies with other countries which may be affected.

6. TMI also notes that certain questions raised by the Commission may, in TMI's case, be covered by the licensing process for TMI's space station with the Canadian Government. TMI proposes that compliance with the Canadian Government's licensing requirements should be a sufficient response to these questions.
7. The Commission seeks comment on its proposal to license both geostationary (GSO) and non-geostationary (NGSO) satellite systems in the same bands (§17). TMI does not object, provided that measures, such as spectrum segmentation as necessary, are employed to avoid harmful intersystem interference.
8. The Commission proposes that, where technically feasible, proposed GSO systems should be able to provide coverage of the 50 states as well as Puerto Rico and the U.S. Virgin Islands (§19). TMI supports this proposal and will be able to comply with it.
9. The NPRM invites comment on the feasibility of providing AMS(R)S in the 2 GHz band (§22). TMI notes that the priority status of aeronautical safety communications has been established in the Upper L-band frequencies. TMI proposes that the priority currently assigned to aeronautical communications in the Upper L-band not be replicated in the 2 GHz band. There is simply no evidence to suggest that the aeronautical industry requires additional spectrum, and MSS providers in this processing round should not have unnecessary and unwarranted constraints placed on them. That said, if a service provider proposes to offer an aeronautical service within its allotment in the 2 GHz band, TMI would not object, provided that service carried no priority status over other operators' allocations.
10. TMI agrees with the Commission's proposal not to require a showing of financial qualification in this round (§24-25). In particular, since it is proposed that all nine

applicants will be awarded spectrum, the Commission is not required to carry out a comparative analysis to eliminate applicants and spectrum can be quickly “recaptured” if authorization holders fail to meet construction “milestones.”

Service-Link Spectrum Assignment Issues

11. The Commission seeks comment on whether its proposal to assign spectrum in 1.25 MHz “multiples” should be adopted (§27). TMI submits that as an initial method of assigning spectrum among the applicants, those frequency increments are suitable. However, as will be noted below, TMI urges the Commission to allow itself flexibility to increase those multiples if and when 2 Ghz satellite operators grow their businesses and require additional bandwidth beyond the initial allotments.
12. The Commission seeks comments on splitting spectrum for allocation to the Regional and Global systems based on the ITU Table of Frequency Allocations (§28). TMI would support such a methodology assuming that there would be no undue relocation burden on current users associated with different portions of the spectrum band.
13. TMI understands that many if not all of the applicants would design their satellite and ground terminals to be tunable to the entire range of frequencies available within the 2 GHz MSS allocations in Regions 1, 2 and 3. This will ensure complete operational and business flexibility to assign frequencies carriers as appropriate in accordance with their authorizations by various administrations.
14. The Commission also seeks comment on how spectrum which had been assigned to a system which was not subsequently constructed should be reassigned to other licensees. It asks whether there should be another “processing round,” when that round should take place, who should be eligible to participate in it. (§29). TMI believes that “unbuilt” spectrum should first be made available to the other applicants in this processing round, very soon after it is determined that the spectrum is available, as a “critical mass” of

spectrum is required to sustain long-term growth and stability for a system. Should none of the first round applicants be able to justify a requirement for additional spectrum, new applicants could be invited to make application for the returned spectrum.

15. Of the Commission's four proposals, TMI supports the selection of the Flexible Band Arrangement (§31-32), as it would appear to be the most equitable and offer the most flexibility to accommodate licensees whose systems grow and require additional allocations of spectrum. TMI also submits that in the resolution of disputes among applicants, both customer traffic requirements and efficiency of spectrum use should be criteria for consideration (§33).
16. With respect to Boeing's proposed use of 600 kHz for downlink only (§35), TMI would suggest that the corresponding uplink spectrum be kept in reserve for use by any applicant who may have a requirement for an unbalanced uplink-only service. Furthermore, Boeing should not be initially allocated more than 2.5 MHz in either direction, including the spectrum needed to meet their unidirectional requirements.
17. TMI is also prepared to accept, as an initial core allotment, 2.5 MHz, comprised of 1.25 MHz in each of the TDMA and CDMA bands. The required guard bands between the allocated bands of different systems should be assigned through negotiation between the system operators as their system proposals are finalized. Operators should be encouraged to reduce their energy spill-over to the maximum practicable level (§34-38).

Flexible Band Arrangement

18. The Commission seeks comment on the impact of the Flexible Band Arrangement on relocation proposals of incumbent 2 GHz licensees (§39). As pointed out in our earlier submissions, TMI opposes the imposition of relocation costs on MSS applicants. One of the reasons why such costs should not be imposed is the present uncertainty regarding the magnitude of those costs, and the negative impact which such an unknown factor

will have on the business planning process. Indeed, such an “unknown” may deter some applicants from proceeding with their plans, which would ultimately penalize consumers by denying them what might otherwise be innovative and cost effective service. Notwithstanding that, if the Commission does require reimbursement, it should not allow some MSS applicants to benefit as against other MSS applicants by virtue of the extent and type of frequency usage by incumbent terrestrial microwave users in the bands MSS operators are assigned. TMI submits that the Commission must impose rules that will allow all satellite operators to incur equal relocation costs, and further submits that the Commission should establish standard reimbursement amounts which are capped at a certain equitable level, in order to reduce the amount of required negotiation between new satellite and incumbent terrestrial licensees.

Negotiated Entry

19. TMI does not favor the Negotiated Entry Approach (§40-43). TMI does not believe it would be prudent to allow early entrants to occupy any spectrum they desire, with the expectation that they will retrench and consolidate at a later time to accommodate later licensees. Such an arrangement would force later entrants to jump one more hurdle prior to beginning service- that of negotiating with incumbent MSS licensees for an optimum spectrum assignment in the face of other obstacles, such as relocation cost reimbursement for terrestrial systems. In terms of the initial allotment to 2 Ghz MSS licensees, TMI believes that the Flexible Band Arrangement provides the most equitable treatment for all users. While TMI expects that some parties are predisposed to pursue “good faith” negotiations, licensees are competitors and by nature these negotiations will be lengthy where they involve competitively valuable spectrum allocations. Of course, other competitors may find it advantageous to delay the successful conclusion of arrangements merely in order to prevent the early advent of competition. Moreover, the Negotiated Entry approach will inevitably lead to “balkanization” of spectrum, with each

operator forced to operate over non-contiguous slices of spectrum, which is inherently inefficient.

20. Notwithstanding, there will likely be opportunities for parties to negotiate arrangements which will provide better and more efficient solutions, and will allow the Commission to avoid involvement in determining such solutions. For example, following the initial allotments as contemplated with the Flexible Band Arrangement, it may suit individual operators better to conclude an arrangement between themselves which will lead to a mutually preferable solution, such as band-sharing between two CDMA operators which can coexist within the same bandwidth. Therefore, the Commission should allow operators to pursue negotiations with each other and bring solutions to the Commission.

Traditional Band Proposal

21. TMI believes that the Commission is correct in its view that the Traditional Band Arrangement may be too rigidly structured to optimize spectrum use (§44-45). This plan is inferior to the Flexible Band Arrangement because it, unlike the Flexible Band Arrangement, precludes future growth potential for those operators who require additional spectrum. TMI does believe, however, that this solution would be an equitable second-choice compromise if consensus cannot be reached among the participants in this proceeding in favor of the Flexible option.

However, since the “traditional” option may limit the efficiency of spectrum use by operators who may be able to reach agreement with each other to coordinate their systems (for example, through sharing of spectrum by CDMA systems), negotiated adjustments among the operators should still be allowed if the Traditional Band Arrangement is adopted.

Competitive Bidding Process

22. TMI disagrees with the Commission's proposed alternative of conducting a competitive bidding process (§46-48). The Commission has demonstrated in the NPRM that sufficient alternatives and flexibility exist to allow the nine applicants to provide service and have access to spectrum for future growth. The bidding process could result in distortions because of such factors as unequal access to capital, which would result in certain licensees having more spectrum than they required, while other licensees would not be able to exploit innovative technologies because of a lack of spectrum. Demand for spectrum would not appear to exceed supply in this case, therefore rendering an auction process unwarranted. TMI would also note that MSS systems will be global or regional in their coverage. Granting authorizations by auction to operate in the U.S. would set a precedent for multiple auctions in different jurisdictions, resulting, at a minimum, in delay and potentially rendering provision of MSS services in the 2 GHz band commercially non-viable.

Feeder Link Frequencies

23. The Commission requests comments on feeder link frequencies in FSS frequency bands (§52-53, footnotes 108 and 109), and TMI's proposal to use the 12.75-13.25 and 10.7-10.95/11.2-11.45 GHz bands for up- and downlinks respectively. The Commission notes that an Appendix 30B procedure has been completed for the use of these frequencies for Canadian MSS feeder link stations, and further notes that the modification may have to be extended to accommodate feeder link stations in the United States being able to access the proposed TMI space station at the 106.5° W.L. orbital location. Should a U.S.-located gateway be contemplated, TMI agrees that it will complete the required Appendix 30B procedures to effect this, as necessary.
24. TMI has determined that its use of the Ku Allotment Band frequencies for an MSS feeder link application will not cause harmful interference to adjacent FSS satellites.

The use of Allotment Ku-band frequencies over satellites is very limited in ITU Region 2. Consequently, TMI's proposal should be found to promote efficient use of spectrum and to be consistent with the Commission's objectives (§61).

TT&C Frequencies

25. The Commission seeks comments on TMI's proposal to use conventional Ku-band frequencies for tracking, telemetry and command ("TT&C"), as it would not conform to the Commission's rules (§67). In response, TMI would expect that the TT&C operations will be carried out via a Canadian control center, and the use of such frequencies would be pursuant to TMI's space station licence granted by the Canadian Government.

Regulatory Classification

26. TMI supports non-common carrier status for both space segment and ground segment (§74-78), in view of the anticipated extensive competition in the provision of MSS services.

Construction Milestones

27. The NPRM proposes that GSO licensees begin construction of their satellites and launch of at least one satellite within one and five years of grant respectively (§85-87). TMI, however, would support a two year construction start period. We consider a period of that length more reasonable, in light of international coordination and other complex regulatory issues which may have to be resolved.
28. TMI believes these timeframes are reasonable to ensure that spectrum is used efficiently. However, TMI submits that these timeframes should not be shortened, particularly because operators will need to negotiate with terrestrial users of this spectrum to mitigate any relocation impacts, and this may require a transitional period which allows terrestrial providers to effect a smooth transition.

29. TMI strongly supports the adoption of contemporaneous construction “milestones” for both U.S. and non-U.S. licensed systems, for precisely the reasons given in the NPRM (§88), namely that the FCC should be able to review all operators’ implementation progress and hold all operators to the same implementation deadlines.
30. TMI agrees that the FCC should impose construction milestones on licensees and LOI filers whether or not licensees have secured access to feeder link assignments (§89). Licensees and LOI filers should be encouraged to secure unencumbered feeder link spectrum within a reasonable time and the “decoupling” of that process from the imposition of construction “milestones” should provide a necessary incentive.
31. TMI also supports the FCC’s tentative conclusion (§93) that no construction “milestones” should be imposed with respect to construction of in-orbit spares and earth segment facilities. We believe that construction of the primary satellite or satellites ought to be sufficient to demonstrate the bona fides of an applicant.

Additional Requirements

32. TMI agrees with the NPRM (§93) that the distress and safety rules previously adopted for Big LEO licensees should also be adopted for 2 Ghz systems. TMI understands and would be willing and able to fulfill its responsibility to offer emergency and safety communications.
33. TMI, however, would suggest that the FCC not now adopt any requirement that 2 Ghz MSS licensees be required to implement an enhanced 911 capability (§99). E-911 service involves complex considerations of cost recovery, potential carrier liability, and coordination with Public Safety Answering Points (PSAPs) far beyond the reasonable scope of this proceeding. The subject of the interface between E-911 and all satellite systems may be a legitimate subject for a separate FCC proceeding, in which TMI would participate. However, having to deal with the difficulties of E-911 requirements in the

context of this proceeding would needlessly delay its resolution.

34. TMI has no objection, in principle, to an anti-trafficking requirement which is implemented in order to ensure that licensees are not selling bare licences for profit (§96). As the Commission points out, it may be questionable whether the FCC has jurisdiction over the sale of non-U.S. licensed systems but, in any case, licensing of that spectrum for use within the U.S. would appear to be subject to the Commission's authority. Therefore, TMI supports the Commission's conclusion that anti-trafficking provisions should not extend to nor prevent business arrangements between operators, particularly in the post-WTO liberalized telecom environment where mergers and alliances may be necessary to meet the competitive challenges.
35. TMI believes that orbit debris mitigation is part of its responsibility as a satellite operator benefitting from access to the space resource (§(97-102).

Mobile Earth Station Licensing

36. The earth station component of the 2 GHz network operating in the U.S. territories should be licensed via a blanket license issued by the FCC. A licensing arrangement similar to that in place for existing MSS networks would be acceptable to TMI. It should be noted that not all the networks would necessarily be GMPCS compliant, and thus the rules to be put in place should not mandate GMPCS compliance. TMI supports mandating that terminals be capable of operation across the band in order to accommodate future spectrum rearrangements, and agrees with the application of current radiation hazard standards. (§(104-107).

International Coordination

37. The Commission seeks comment on the impact that this processing round will have on international coordination for non-U.S.-licensed satellites (§110). In TMI's case, spectrum will be internationally coordinated by the Canadian administration. TMI

expects that the frequencies allotted to it by the FCC can be coordinated by the Canadian Government. The issue has a greater bearing, however, on the ability of the nine applicants in this processing round to coordinate their U.S. spectrum with other countries in Region 2. TMI notes that all systems, both those filed by U.S. operators and LOI filers, will be subject to international coordination requirements. Operators may find that the design of their systems will need to be modified if they are unsuccessful in achieving coordination with other countries. Such design alterations could include the limiting of their coverage to exclude certain countries, or the inclusion of a series of spot beams which can operate in different frequencies. In either case, both configurations may limit their operational efficiencies and increase their costs significantly, or reduce their potential market. Certainty with respect to the uniformity of spectrum allocation throughout Region 2 would result in optimum use of spectrum and operational efficiencies which are unlikely to exist if the U.S. allocation model cannot be applied elsewhere.

38. Therefore, the Commission should coordinate with other countries in the region to ensure that their proposed spectrum allocation is not inconsistent with U.S. plans, such that operators would not be faced with unforeseen and lengthy delays at a future time.
39. As stated above, TMI supports the concept of Flexible Allocation and the position of the GSO TDMA services at the edge of the band. Adjacent band interference requirements should be established in such a manner that no undue burden be placed on any operator by virtue of its position within the 2 GHz band.

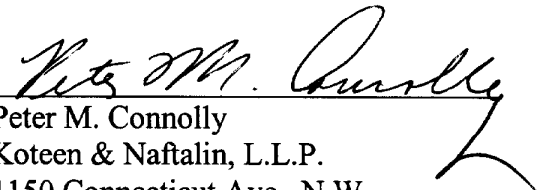
Conclusion

40. In conclusion, this processing round is an opportunity for the Commission to promote true competition in the satellite market and bring to consumers new and innovative services. This innovation will be achieved, in part, through allowing operators the certainty of a core spectrum allotment but also by allowing sufficient flexibility for

operators to allow them access to more spectrum for the future growth of their businesses if warranted by market conditions. Therefore, TMI urges the Commission to adopt the Flexible Band Arrangement proposal contained in the NPRM and the other positions endorsed herein.

Respectfully submitted,

**TMI COMMUNICATIONS AND
COMPANY LIMITED PARTNER-
SHIP**

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